

MITTWOCHSVORTRAGSREIHE AM PSYCHOLOGISCHEN INSTITUT
DER UNIVERSITÄT SALZBURG
IN ZUSAMMENARBEIT MIT DER SALZBURGER GESELLSCHAFT FÜR PSYCHOLOGIE

Vortrag am: 16.06.2004

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**Thema: The development of basic numeracy: evidence from a very large
scale study**

Most of us are able to recognise the number of objects in a display up to about four without seeming to count. For more than four, counting is needed to get the exact number. But are there really two processes: “subitizing” for instant recognition and counting? We have shown that there are two processes by discovering one factor that affects counting only and one factor that affects subitizing only. In a very large scale reaction time experiment, we asked subjects to say whether a numeral (e.g. 2) corresponded to a display of dots using an installation at the *explore@bristol* science museum where people can test their speed and accuracy on tests of basic numerical ability. More than 20000 people of all ages have taken the test making this probably the largest ever reaction time experiment. Results from first 18000 people looked at the effects of ages, orientation, and sex, and confirmed in a surprising way an important hypothesis about the innate system for recognising the number of things in an array.